

As *R. transformans* has never been reported on *Amelanchier* certain infections of this host which I obtained in 1914 were open to the question of accidental field contamination of teleospore material by spores from *G. biseptatum*. Converse inoculations from the roestelia obtained on *Aronia* back to small potted plants of *Chamaecyparis* were made during the summer of 1914 and a considerable number of sori of "*G. fraternum*" appeared on the leaves in February and March. Whether these sori came from the artificial infections or from a perennial mycelium in the cedars, can be determined only by further work.

A large number of infections on both *Aronia* and *Amelanchier* have been obtained with this material this spring. The results agree with those of last year. The change of aecidial host has been followed not only by a different reaction of the host plant to the fungus as shown by the hypertrophies or galls, but also by the transformation of the fungus itself to such an extent that what has been regarded as a characteristically different aecidium is developed.

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## REVIEWS

### The *Scinaia* Assemblage\*

A phycological paper of unusual systematic and biologic interest is that on "The *Scinaia* Assemblage" recently published by Professor Setchell. *Scinaia*, a genus of red algae of the small family Chaetangiaceae, was first recognized and named nearly a hundred years ago and for a long time was considered to have but a single species, *Scinaia furcellata*, which was described originally from England, but had since been held to occur in the Mediterranean, on our Atlantic coast from southern Massachusetts to Florida, and on the coasts of California, Chile, South Africa, New Zealand, Hawaii, Japan, etc. Later, in part from plants that had been passing as *S. furcellata* and in part from plants so different in habit as to have escaped confusion with it, other species had been described until the genus was currently

\* Setchell, William Albert. The *Scinaia* Assemblage. Univ. California Publ. Bot. 6: 79-152. pl. 10-16. 7 O 1914.

credited with six species. And in 1876 the generic name *Gloiophloea* had been proposed by J. Agardh for an Australian plant that had been previously referred to *Scinaia furcellata*. It was this group of seven supposed species, currently placed in two genera, that Setchell undertook to set in order, and in this undertaking he has evidently met with distinguished success. In this assemblage, in the world as a whole, Setchell now finds grounds for recognizing twenty species, distributed in three genera—*Scinaia* with eleven species, *Gloiophloea* with seven, and *Pseudoscinaia*, a new genus, with two species. In what, until recently, had been passing as *Scinaia furcellata* on the eastern and western coasts of North America, he now recognizes eight species, of which he places five in *Scinaia*, two in *Gloiophloea*, and one in *Pseudoscinaia*. It should, perhaps, be remarked that the thallus in all the plants of the group is very gelatinous and dried specimens do not revive satisfactorily on being soaked out, even when swelling reagents are applied. To this last fact and to the study of dried specimens alone are doubtless to be attributed some of the confusions that have obtained in the past.

Differences in the structure of the cystocarp, in the character of the cortex, and in the external form of the thallus, are, in the main, what the author of the paper has relied upon for diagnostic peculiarities. Just how distinct all of the proposed genera and species really are, of course remains for the future to determine, but so far as the material now available is concerned, they do not seem to intergrade, even though they are sometimes superficially similar. The case of the *Scinaia* assemblage appears to be much like that of many other tangles all along the line from the algae and fungi to the seed-plants that have been unraveled in the last few years—cases in which a supposed extremely variable and widely distributed species has been found on critical study to consist of two or more separable non-intergrading things, sometimes with distinct and limited geographic ranges or sometimes with nearly identical overlapping or widely extended ranges. When only two things have been confused it is usually not very difficult to separate them, but when three or more re-

lated things have been lumped together under one specific name it is nearly always a most difficult matter to recognize and group properly the real distinctive characters. Professor Setchell certainly deserves congratulation for getting hold of the tangled threads in what seems to be the right way in this *Scinaia* matter.

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David Douglas's Journal

A volume of unusual interest to the Pacific Northwest has just been published by the Royal Horticultural Society of London, entitled "Journal kept by David Douglas During His Travels in North America 1823-1827, Together With a Particular Description of Thirty-three Species of American Oaks and Eighteen Species of *Pinus*, With Appendices containing a List of the Plant Introduced by Douglas and an Account of his Death in 1834."

Douglas was the botanist for whom the most important timber tree in the Pacific Northwest, viz., the Douglas or red fir, is named.

The portion of the present volume of most interest to students of the Northwest is that part of the verbatim Journal kept by Douglas during his first trip to western America, from the time he reached the mouth of the Columbia River, April 7, 1825, until he sailed from Hudson Bay September 15, 1827. This journal covers 218 printed pages. During this period Douglas made botanical explorations from his headquarters at Fort Vancouver as far south as the Rogue River Mountains in Oregon; northward to Gray Harbor and the head of Puget Sound; in the interior all along the Columbia River to Kettle Falls; the region between Spokane and the present site of Lewiston, Idaho; the Craig Mountains; the Blue Mountains about the source of the Walla Walla River; and finally across the continent by way of the upper Columbia River and down the Athabaska and Saskatchewan Rivers to Lake Winnipeg and thence to Hudson Bay.

The only account of these explorations previously published is a condensed narrative by Douglas published after his death by Sir William J. Hooker. This condensed narrative is republished in the present volume. The original is in Douglas's own hand-